Section H

Spent Nuclear Fuel

PROJECT MANAGERS

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INTRODUCTION

The Spent Nuclear Fuel (SNF) Project consists of Project Baseline Summary (PBS) RL-RS03, Work Breakdown Structure (WBS) 3.2.3.

NOTE: Unless otherwise noted, all information contained herein is as of the end of August 2002.

Fiscal year (FY) to date milestone performance (EA, HQ, and RL) shows one milestone overdue.

NOTABLE ACCOMPLISHMENTS

Fuel Movement Activities — Activities included:

- SNF Project MCO productivity has experienced a positive trend during the past several months: ten Multi-Canister Overpacks (MCOs) processed per month in June and July; fifteen in August. During this reporting period, fourteen MCOs containing 85.35 Metric Tons of Heavy Metal (MTHM) were shipped from K West (KW) (100 MCOs and 508.83 MTHMs, cumulatively). To date, the SNF Project is 52 working days (31 MCOs, 104.91 MTHM) behind the baseline schedule commitment to move 720.1 MTHM by the end of fiscal year (FY) 2002.

- Established a Production Control organization to facilitate detailed production and project integration and schedules, the maintenance organization realigned under a new manager reporting to the project director and project technology, engineering, and nuclear safety consolidated under one manager reporting to the project director. A Requirements Improvement Team (RIT) has also been established and has identified 11 potential breakthroughs to improve process times. A workshop with Fluor Hanford (FH) and RL expanded the 11 commitments to 13 and established commitment dates for FH submittals and RL approvals.

Site-Wide Activities — Activities included:

- Received first shipment of Light Water Reactor (LWR) fuel from the 324 Building and Shippingport Reactor SNF from T-Plant.
- Continued planning for SNF removal in support of Fast Flux Test Facility (FFTF) and PFP accelerated closure.

Fuel Transfer System (FTS) Construction — Activities included:

- Completed Construction Acceptance Tests (CAT) at both K East (KE) and KW on August 7, 2002.
- Acceptance Test Procedures (ATP) were complete August 20, 2002.

Canister Cleaner Operations — Activities included:

- Removed 120 (631 cumulatively) canisters and prepared for shipment and disposal. A cumulative total of 572 canisters have been shipped to the Environmental Restoration Disposal Facility (ERDF).

Sludge Water System (SWS) — Activities included:

- Submitted STS Functional Design Criteria (FDC), Revision 1 for review August 15, 2002.
- Continued to work with PacTec to expedite fabrication and delivery of the sludge transportation system (STS) casks, Large Diameter Containers (LDC) and Transport Trailers. Sludge Retrieval System (SRS) progress included: Completed the installation of 11 of 12 pipe supports; received pump supports; continued pre-fabrication of piping.

Sludge Handling Modification Activities — Activities included:

- All in cell work completed – cells cleaned and leveling bases, containment systems, and leak detectors installed.
- Completed installation of water addition system.
- Completed ATPs for leak detection power and alarms.
- Submitted T Plant Safety Assessment for FH review/approval.

MCO and MCO Basket Fabrication Shop — Activities included:

- Continue MCO Mark IV scrap baskets continue. Production continues with sufficient lead-time to ensure no interruption to the fuel packaging process. The production of MCO basket base plates has been completed for all scheduled MCO baskets.

Safety

No Lost Away Workday injuries were reported within the SNF Project, thus allowing an achievement of over five million safe work hours by the end of August 2002. The project experienced an increase in OSHA Recordable cases during the month, and in the DOE Safety Cost Index. This has been discussed at SNF Project staff meetings. Emphasis continues to be placed on management commitment and worker involvement utilizing the Integrated Safety Management (ISM) System.

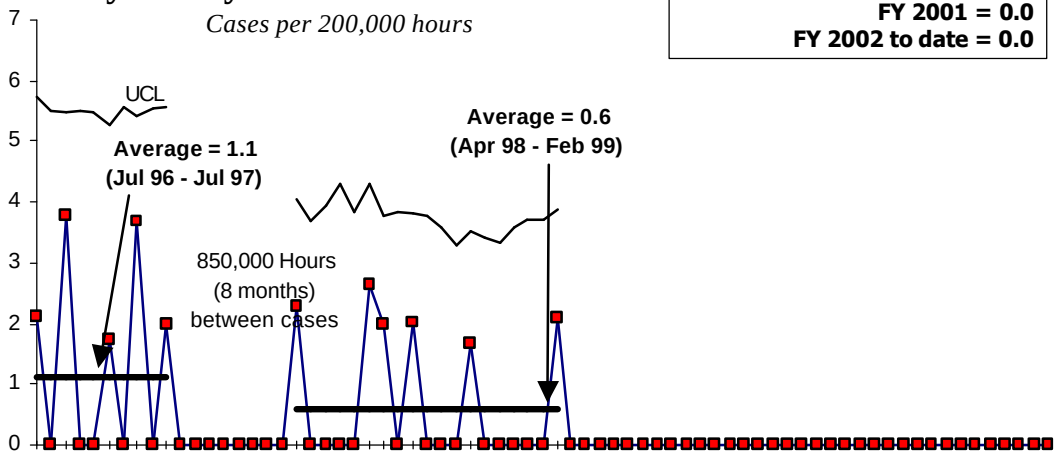
SAFETY

Days Away From Work Case Rate

Cases per 200,000 hours

Project Safe Hours = 5,079,728
FY 2001 = 0.0
FY 2002 to date = 0.0

Green

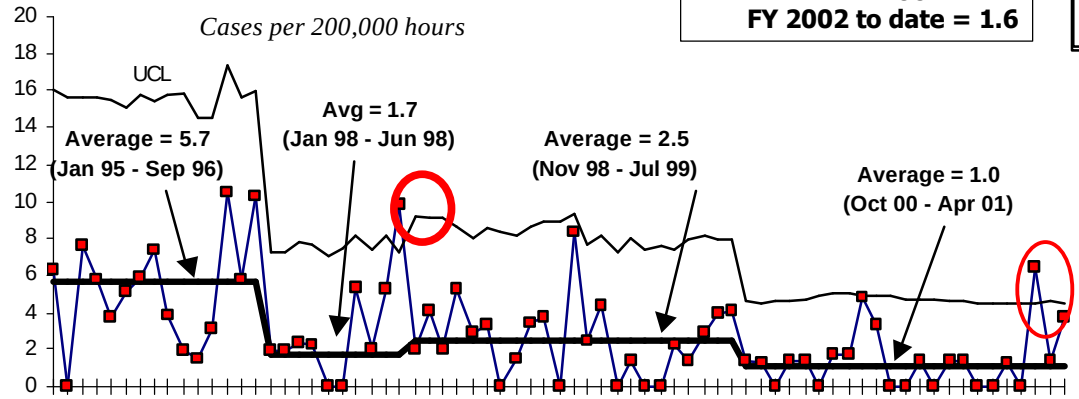


OSHA Recordable Case Rate

Cases per 200,000 hours

FY 2001 = 1.4
FY 2002 to date = 1.6

Red

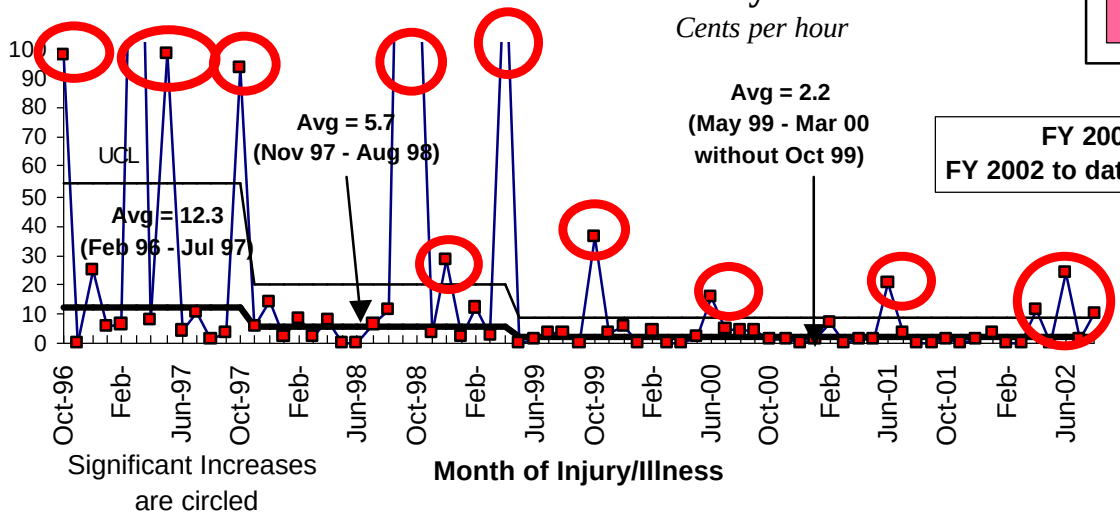


DOE Safety Cost Index

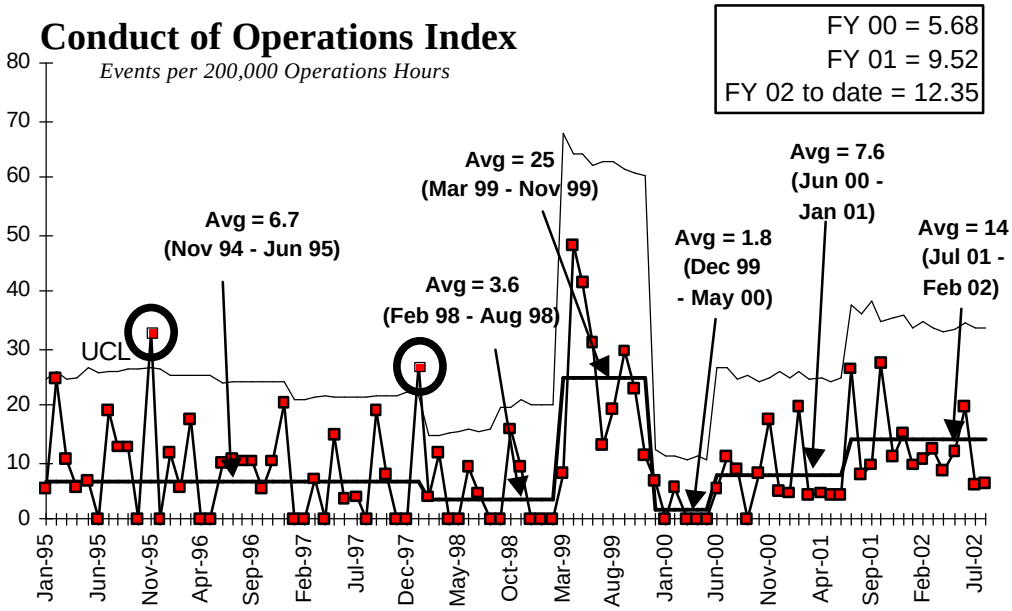
Cents per hour

Red

FY 2001 = 3.1
FY 2002 to date = 4.9



Conduct of Operations



The SNF Project continues to make progress towards actions identified in the CONOPs Improvement Plan. The project conducted a quarterly CONOPs review, which indicates that personnel performance areas appear to be on a positive trend. Additional focus has been applied to the project's lock and tag program. The manager in the field activities will be focused on radiological controls due to recent contamination events.

Breakthroughs / Opportunities for Improvement

Breakthroughs

Nondestructive Examination (NDE) of Contamination in the KE Basin Walls and Floors — A significant activity necessary to deactivate the 100 Area KE Basin is to characterize the level of contamination in the basin's unsealed concrete walls and floor. This characterization data will be used as part of the technical basis to determine the methods to be applied in completing the deactivation of the basin, once the fuel and sludge have been removed.

The SNF Project will be using nondestructive (gamma scanning) techniques and detector systems, developed by the Pacific Northwest National Laboratory, to acquire data on the depth of radionuclide penetration in the basin's concrete walls and floors. This is the first time the NDE technique will be used to obtain characterization data with the facility in normal operation, with its full inventory of fuel, sludge and contaminated water. If successful, the data will be used, in conjunction with other information, to determine which deactivation methods can realistically be used to remove/reduce the radiological dose/contamination, as well as to determine which basin areas are in the greatest need of mitigation. After initial deployment in the KE Basin, the wall detector system received basin water contamination, which must be resolved before data gathering can resume.

Opportunities for Improvement

Witness Model — The baseline model has been produced and used for production capability assessment. The model continues to be a useful tool in evaluating the knowledge of the project, critical path and in prioritizing actions to reduce the critical path length. The model is being updated with additional detail to more accurately reflect the project's new critical path. It will continue to be periodically updated and used for confirmation of the critical path and actions to reduce the critical path. All modifications are expected to be complete by September 30, 2002.

Upcoming Activities

FTS — Complete Section 1B, Completion of Exceptions, of the Construction Completion Document by September 12, 2002.

FTS — Complete Section 2A, Completion of Operational Testing and Approval of Test Results, by September 12, 2002.

FTS — Begin contractor Operational Readiness Review (ORR) September 25, 2002.

SWS — Receive cask and container for sludge in September 2002.

SWS — Complete SWS construction by October 2002.

FTS — Begin DOE ORR in October 2002.

FTS — Begin KE to KW fuel transfer by November 30, 2002 (M-34-17).

SWS — Complete ORR in November/December 2002.

SWS — Operational by December 31, 2002 (M-34-08).

Fuel Movement — Complete removal of 957 MTHM from KW Basin by December 31, 2002 (M-34-18A).

MCO Welding — Begin welding of MCOs at Canister Storage Building (CSB) by February 3, 2003.

MILESTONE ACHIEVEMENT

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/ Comments
M-34-06-T01	Initiate K West (KW) Basin Spent Nuclear Fuel (SNF) Canister Cleaning Operations	TPA	08/31/01	3/15/02		Complete
M-34-29	Complete KE Basin and KW Basin facility modifications for AFTS casks transportation system	TPA	3/31/02		9/12/02	Complete
M-34-12-T01	Complete construction of SWS	TPA	09/30/02		12/23/02	Behind schedule. Complete construction by 10/31/02 and ATPs by 12/23/02. (challenging)
M-34-17	Initiate KE to KW fuel transfer	TPA / PI	11/30/02		11/30/02	On schedule
M-34-18A	Complete removal of 957 MTHM of SNF from the KW Basin	All 3	12/31/02		12/31/02	Currently 47 days behind schedule.
M-34-08	Initiate full scale KE basin sludge removal	TPA/DNFSB	12/31/02		12/31/02	On schedule (challenging)
M-34-27-T01	Complete removal of 1252 MTHM of SNF from KW Basin	TPA	5/31/03		5/31/03	On schedule
S09-03-010	Decide treatment path for sodium removal from FFTF	TIP	09/30/03		09/30/03	On schedule
M-34-28	Complete removal of 1619 MTHM from the KW Basin	TPA	12/31/03		12/31/03	On schedule
M-34-25-T01	Complete transfer of KE Basin SNF to KW Basin	TPA	5/31/04		5/31/03	On schedule
M-34-18B	Complete removal of all K Basin SNF	ALL 3	7/31/04		7/31/04	On schedule
M-34-10	Complete sludge removal from K Basins.	ALL 3	8/31/04		8/31/04	On schedule

MILESTONE ACHIEVEMENT (CONTINUED)

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/ Comments
M-34-23	Start KE water removal	TPA	9/30/04		9/30/04	On schedule
M-34-09-T01	Complete K Basins rack and canister removal	TPA / PI	1/31/05		1/31/05	On schedule
M-34-24	Complete KE Basin Water removal	TPA	9/30/05		9/30/05	On schedule
M-34-21-T01	Initiate full-scale KW Basin water removal	PI	10/31/05		10/31/05	On Schedule
S06-06-006	Complete K Basin water removal	PI (Stretch)	4/30/06		4/30/06	On schedule
M-34-22	Complete KW Basin water removal	TPA / PI	8/31/06		8/31/06	On schedule
S06-06-004	Complete transition activities for CVD and other facilities	PI	9/30/06		9/30/06	On schedule
S06-06-005	Transfer of K Basins to the River Corridor Contractor	PI (Stretch)	9/30/06		9/30/06	On schedule
M-34-00A	Complete removal of K Basin fuel/sludge/debris/water from K Basins	TPA (Major)	7/31/07		7/31/07	On Schedule
S20-10-010	Select technology to prepare SNF MCOs for shipment and demonstrate	TIP	12/30/10		12/30/10	On schedule

NOTE: Above data includes all TPA/DNFSB/Performance Incentive milestones as included in the FH baseline, and provides Contract-to Date status.

Performance Objectives

Move Fuel Away from the River

EXPECTATION: Remove spent fuel from K Basins

Move 720.1 Metric Tons Heavy Metal from KW Basin by end of FY 2002

Status: A cumulative total of 100 MCOS containing 508.83 MTHM have been shipped. Currently 52 working days (31 MCOs, 104.91 MTHM) behind the baseline schedule commitment to move 720.1 MTHM by the end of fiscal year (FY) 2002.

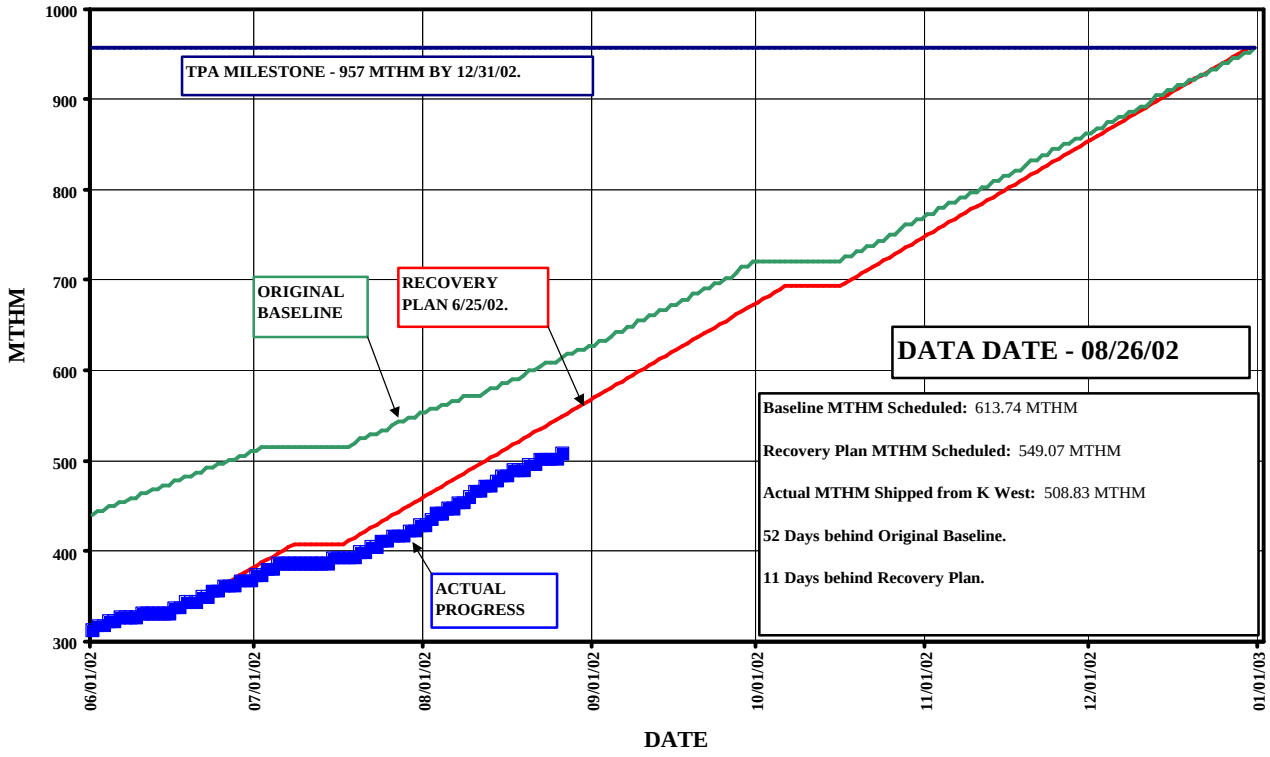
Complete construction on Fuel Transfer System by March 31, 2002

Status: KW and KE equipment CAT complete August 7, 2002. Complete Operational Testing and Approval of Test Results by September 12, 2002.

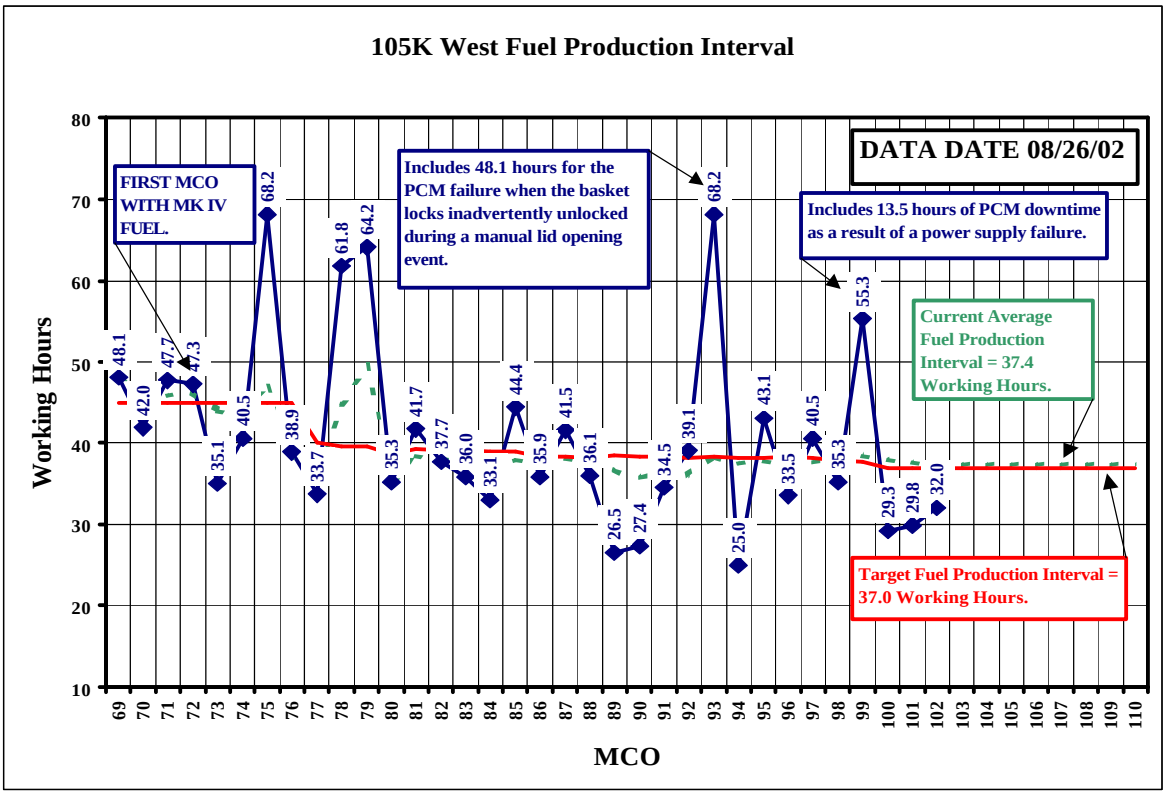
Commence KE to KW Fuel Transfer by November 30, 2002

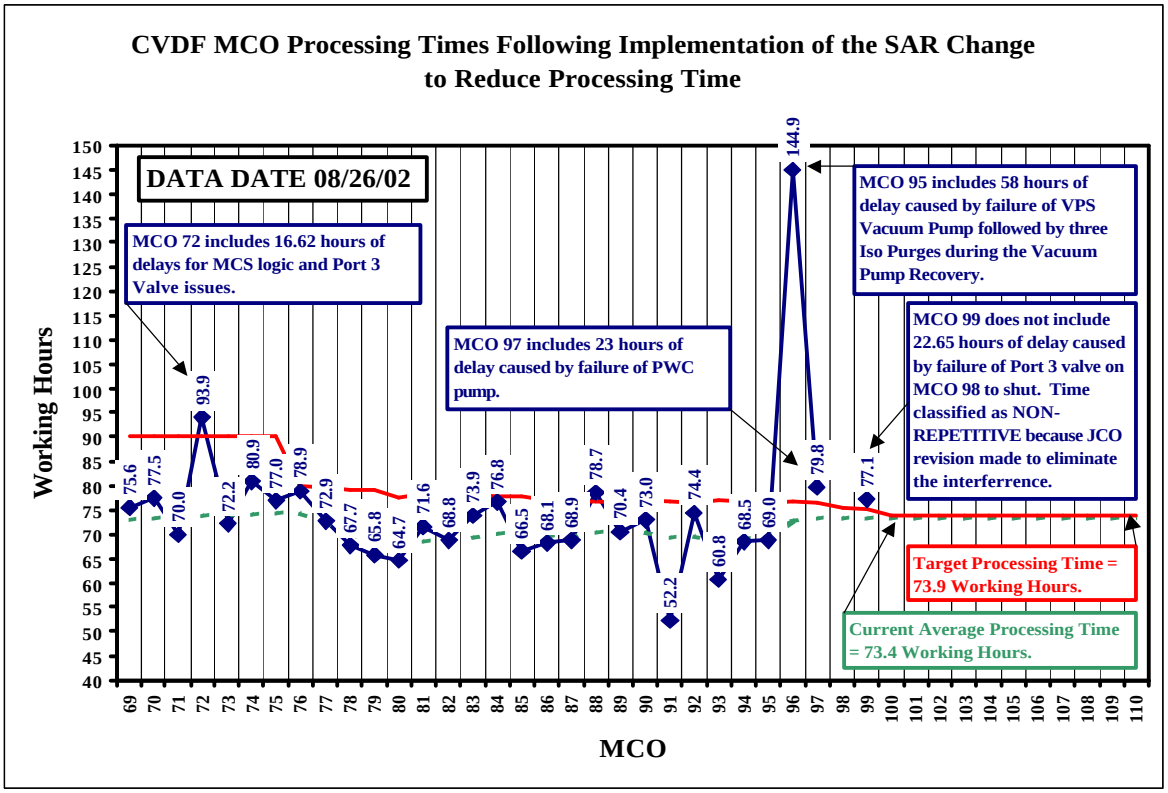
Status: On schedule.

Metric Tons Heavy Metal (MTHM) Shipment Recovery Plan



PERFORMANCE OBJECTIVES (CONTINUED)





PERFORMANCE OBJECTIVES (CONTINUED)

EXPECTATION: Move Sludge and Water from K Basins

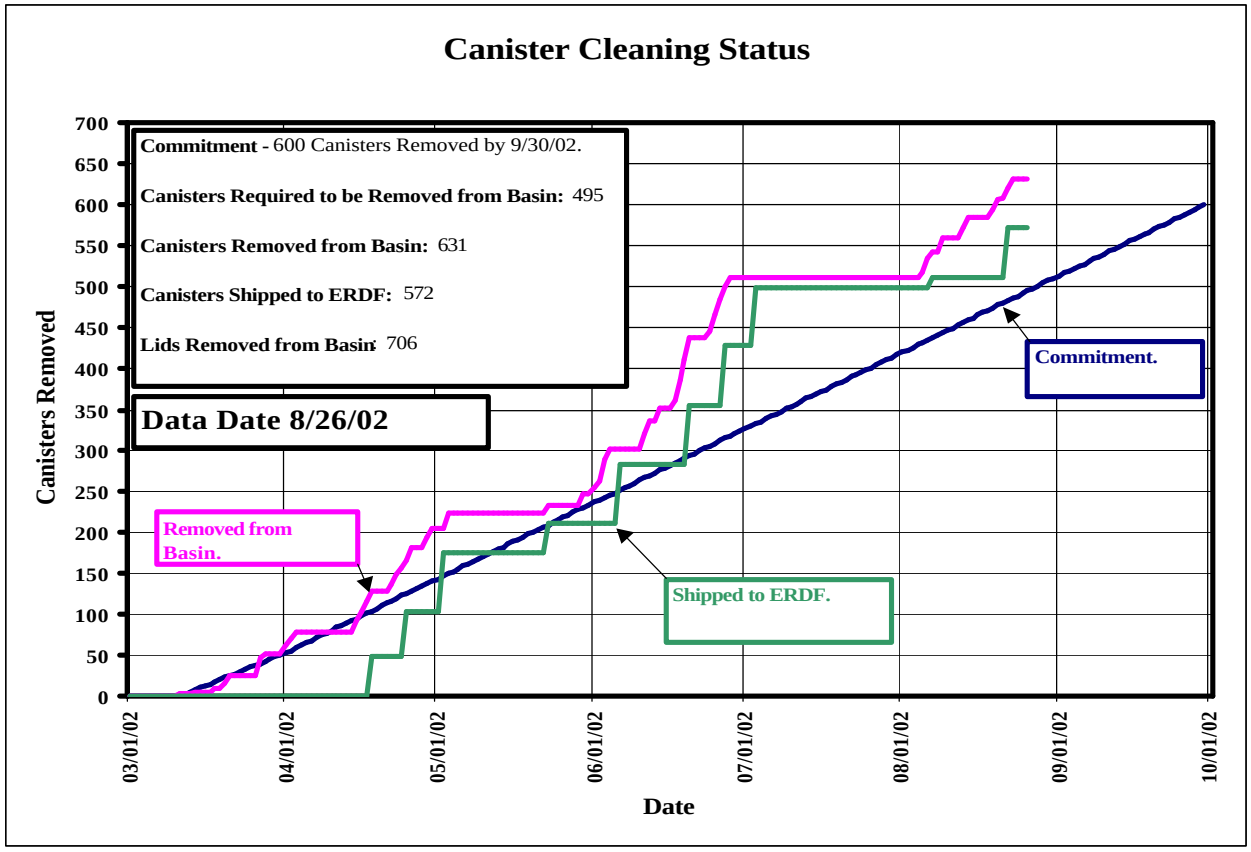
Initiate Sludge Movement by December 31, 2002.

Status: New detail schedule forecasts February 13, 2003 to initiate sludge removal (Milestone M-34-08, due December 31, 2002); efforts are underway to recover vendor equipment delivery date to October 18, 2002, complete construction by October 31, 2002, and initiate sludge removal by December 27, 2002.

EXPECTATION: Remove canisters from K Basins

Remove 600 canisters from KW by fiscal year end.

Status: A total of 631 canisters have been cleaned fiscal year to date and 572 canisters were shipped to ERDF. The SNF project is 136 canisters ahead of schedule.



Consolidate Non-Production Reactor Fuel

EXPECTATION: Consolidate site-wide non-production reactor fuel in 200 Area

Move .02 MTHM in fiscal year 2002.

Status: Received of the first shipment of LWR fuel from the 324 Building in August 2002. The project is will be moving an additional 1.6 MTHM in support of 324 Building LWR SNF transfer stretch goal (with River Corridor).

SCHEDULE / COST PERFORMANCE – ALL FUND TYPES
FY TO DATE STATUS ($000)

		FYTD							
	By PBS	BCWS	BCWP	ACWP	SV	%	CV	%	BAC
PBS RS03 WBS 3.2.3.1	SNF Project, 100 K Basins	$ 109,143	105,721	$ 121,535	$ (3,422)	-3%	$ (15,814)	-15%	$ 120,770
PBS RS03 WBS 3.2.3.2	Canister Storage Building (to2004)	$ 9,152	$ 9,285	$ 9,603	$ 133	1%	$ (318)	-3%	$ 10,673
PBS RS03 WBS 3.2.3.3	200 Intrim Storage Area (to2004)	$ 2,665	$ 2,314	$ 1,467	$ (351)	-13%	$ 847	37%	$ 2,935
PBS RS03 WBS 3.2.3.4	SNF Project Management and Support	$ 35,025	$ 35,031	$ 32,804	$ 6	0%	$ 2,227	6%	$ 39,325
	Total	$ 155,985	$ 152,351	$ 165,409	$ (3,634)	-2%	$ (13,058)	-9%	$ 173,703

FY TO DATE SCHEDULE / COST PERFORMANCE

The SNF FYTD unfavorable schedule variance is primarily driven by the following areas, which are behind: SWS construction/procurement, Canister Cleaning, FRCO Operation Support, MCO Fabrication and T-Plant type 2 (wet). The unfavorable cost variance is primarily driven by additional scope in FTS construction/engineering, SWS engineering and construction, Facility maintenance/operations and actual labor rates being higher than planned.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, FYTD Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

Schedule Variance Analysis: (-$3.6M)

3.2.3.1 SNF Project, 100K Area (-$3.4M)
Description /Cause: The unfavorable 3 percent schedule variance is primarily due to emergent work in SWS.
Impact: None to report.
Corrective Action: None required.

3.2.3.3 200 Area Interim Storage (-$0.4M)
Description /Cause: The unfavorable 13 percent schedule variance is primarily due to delays in the transfer of PWR Core.
Impact: None to report.
Corrective Action: None required.

Cost Variance Analysis: (-$13.1M)

3.2.3.1 SNF Project, 100K Area (-$15.8M)

Description /Cause: The unfavorable 15 percent cost variance is primarily due to emergent work in FTS and SWS, and actual labor rates being higher than planned.

Impact: None to report.

Corrective Action: None required.

3.2.3.3 200 Area Interim Storage (+$0.9M)

Description /Cause: The favorable 37 percent schedule variance is primarily due to delays in the transfer of PWR Core, transloading and FFTF activities.

Impact: None to report.

Corrective Action: None required.

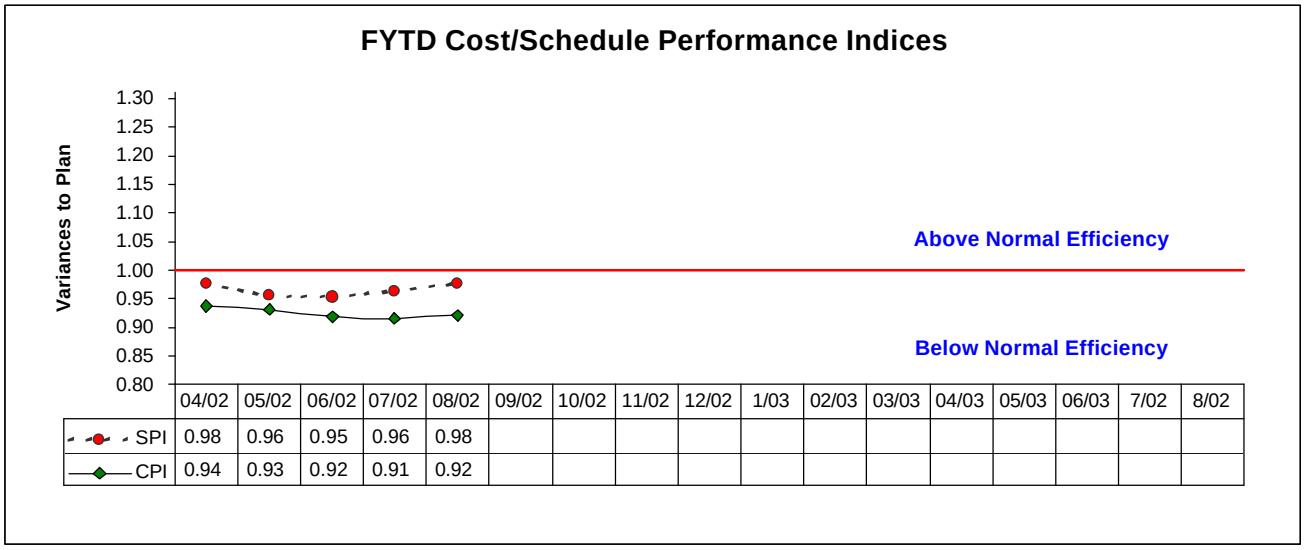
3.2.3.4 SNF Project Management and Support (+$2.2M)

Description/Cause: The favorable six percent cost variance is due to FY 2001 underruns in the infrastructure support account and project direction.

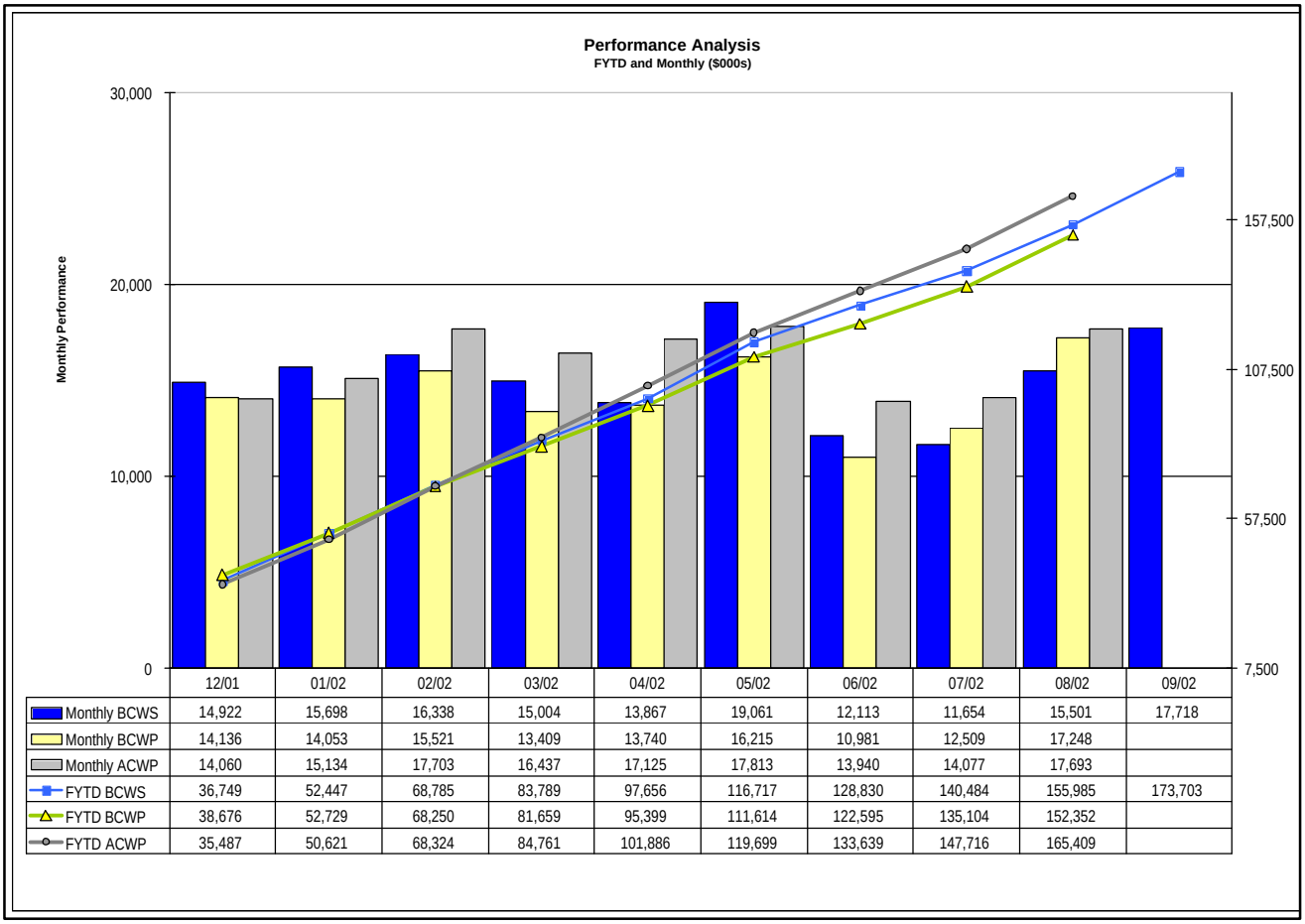
Impact: None to report.

Corrective Action: None required.

Schedule / Cost Performance (Fiscal Year to Date and Monthly)



	04/02	05/02	06/02	07/02	08/02	09/02	10/02	11/02	12/02	1/03	02/03	03/03	04/03	05/03	06/03	7/02	8/02
SPI	0.98	0.96	0.95	0.96	0.98												
CPI	0.94	0.93	0.92	0.91	0.92												



	12/01	01/02	02/02	03/02	04/02	05/02	06/02	07/02	08/02	09/02
Monthly BCWS	14,922	15,698	16,338	15,004	13,867	19,061	12,113	11,654	15,501	17,718
Monthly BCWP	14,136	14,053	15,521	13,409	13,740	16,215	10,981	12,509	17,248	
Monthly ACWP	14,060	15,134	17,703	16,437	17,125	17,813	13,940	14,077	17,693	
FYTD BCWS	36,749	52,447	68,785	83,789	97,656	116,717	128,830	140,484	155,985	173,703
FYTD BCWP	38,676	52,729	68,250	81,659	95,399	111,614	122,595	135,104	152,352	
FYTD ACWP	35,487	50,621	68,324	84,761	101,886	119,699	133,639	147,716	165,409	

FUNDS MANAGEMENT – FY 2002 TO DATE
FUNDS VS SPENDING FORECAST ($000)

	FH Funds Reallocation	FYSF	Variance
3.2.3 Spent Nuclear Fuel			
RS03			
Project Completion - Operating	**$ 176,389**	**$ 184,300**	**$ (7,911)**
			0
Total	**$ 176,389**	**$ 184,300**	**$ (7,911)**

Status through 8/30/2002

ISSUES

Technical Issues

Issue: MCO number 63 did not pass its integrity test.
Corrective Actions: MCO #63 remains under surveillance in bay two of the Cold Vacuum Drying Facility (CVDF). The disposition of MCO #63 was established as a top priority by the RIT. This high priority designation has resulted in an agreed path forward by RL and FH to obtain necessary approvals that will support shipment of the MCO to the CSB by October 7, 2002.
Impact: Negative impact toward meeting fuel movement commitments.

Issue: Equipment reliability continues to be a major focus for sustaining fuel movement.
Corrective Actions: Fluor consulting personnel continue to evaluate unit operations for efficiency improvements. A number of recommendations have been incorporated into the KW manipulator repair program, and have resulted in maintenance staff-hour savings.
Impact: Continued equipment failures may negatively impact meeting fuel movement commitments.

Issue: Production schedule improvement.
Corrective Actions: Established a Production Control organization to facilitate detailed production and project integration and schedules and realigned the Maintenance organization to the Project Director. A RIT has also been established that identified 11 potential breakthroughs to improve process times. A workshop with FH and RL expanded the 11 commitments to 13 and established commitment dates for FH submittals and RL approvals.
Impact: The SNF Project's production rate must increase in order to meet the December 30, 2002 fuel movement milestone date.

Issue: FTS construction completion.
Corrective Actions: KW and KE equipment CAT complete August 7, 2002. Complete Operational Testing and Approval of Test Results by September 12, 2002.
Impact: FTS milestone scheduled for completion March 31, 2002, is forecast for completion September 12, 2002 and supports commencement of contractor ORR on September 25, 2002 and FTS operations in early November 2002.

Issue: SWS Schedule Delays.

Corrective Actions: New detail schedule forecasts February 13, 2003 to initiate sludge removal (Milestone M-34-08 due December 31, 2002); efforts are underway to recover vendor equipment delivery date to October 18, 2002, complete construction by October 31, 2002 and initiate sludge removal by December 27, 2002.

Impact: SWS construction will not be complete September 30, 2002 due to delayed subcontractor delivery dates. The forecast completion is October 2002 and will support the December 31, 2002 milestone to begin sludge removal from the KE Basin (M-34-08).

Regulatory, External, and DOE Issues and DOE Requests

None to report.

BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

None to report.